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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,182	10/26/2005	Sebastien Weitbruch	PD020082	3480

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EXAMINER

NATNAEL, PAULO S M

ART UNIT	PAPER NUMBER
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2622

MAIL DATE	DELIVERY MODE
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11/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,182	Applicant(s) WEITBRUCH ET AL.	
	Examiner PAULOS M. NATNAEL	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 14, 16, 17, 20, 21 and 23 is/are rejected.
- 7) ☒ Claim(s) 15, 18, 19, 22 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Page 2, lines 11-28 of the specification is redundant because it repeats the discussion in the paragraph before. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **13-14, 16-17, 20-21 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lillevold, US **7,054,500** in view of Noda et al., US **5,617,135**.

Considering claim **13**, Lillevold discloses the following claimed subject matter,

a) digitally filtering a signal charged with said noise with a digital filter having a plurality of filter coefficients....is met by Filter 30 which is a digital filter (col. 8, line 15).

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b) varying at least one of said filter coefficients of the filter....is met by the disclosure that " ..the filter 30 has a variable filter strength that depends upon the motion activity within a picture. The filter strength can be adjusted by varying the filter coefficients of the filter 30. In one embodiment, the filter 30 may be adjusted to have one of a number of predetermined levels representing different filter strengths (col. 8, lines 17-23; emphasis added). Lillevold discloses that the quantization errors that occur in the DCT domain are smeared across the corresponding spatial block. Furthermore, since each block is quantized separately, the errors are most visible at the block boundaries (col. 2, lines 1-11).

Except for;

c) the claimed "said signal including a video level for each pixel of said display ...[and varying the filter] in dependence on the video level for a current pixel by stronger filtering a lower video level for said pixel while less filtering or not filtering a higher video level for said pixel to reduce noise in the lower video level."

As the applicant's background discussion shows, video level (luminance or brightness levels) would be obvious to the skilled in the art and Lillevold is not entirely silent in this regard. The reference teaches frame-by-frame processing which is further broken into 4x4 micro-block and, as is well known, the micro-block represents blocks of pixels. Furthermore, Lillevold discloses that "the total number of macroblocks in a frame depends on the size of the video frames or the resolution of the video frames (col. 7, lines 45-63). Since any image has a certain resolution, i.e. a limited amount of pixels, and video level pertains to individual pixels, an image has an amount of video level that

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is proportional to the number of image pixels. Therefore, the amount of video level may correspond to a number of pixels, i.e., resolution of the image, or to a percentage of all pixels of the image. Hence, the reference of Lillevold, by processing the video pixel-by-pixel, is also processing and analyzing the video level (brightness or luma) of the video in each pixel block.

To illustrate this point further, Noda, in the same field of endeavor, discloses a communication system comprising an adaptive filter for controlling a spatial frequency characteristic of a video signal which takes into consideration the video information quantity (Abstract). Noda teaches that video information of the video signal (brightness or luminance) contained in the frequency band is analyzed and then compared to quantities in the communication network in order to determine if the filter coefficient needs to be adjusted. If so, the filter control 3 shifts the operation to filter coefficient change procedure (*see, col. 7, lines 65-67; col. 8, lines 5-21*). *Noda therefore teaches adjusting/varying filter coefficient depending on the video information acquired.*

Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Lillevold by providing the method of Noda which analyzes or computes the video information for every field or frame in order to decide whether or not the filter coefficients of the filter 30 need any adjustment.

As to claim **14** wherein said filtering includes one and/or two dimensional low pass filtering, is met by the disclosure on paragraph [0009]: In order to reduce the effects of the coding artifacts, it is known to apply a post-processing technique to the recovered

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image. Since the artifacts typically comprise high frequency components, decoders in systems that apply such post-processing include a postprocessor having a low-pass filter to filter out those components in the recovered image.

As to claim **16**, see rejection of claim 13.

Regarding claim **17**, see rejection of claim 13.

Considering claim **20**, see rejection of claim 13.

As to claim **21**, see rejection of claim 14.

Considering claim **23**, see rejection of claim 13.

Response to Arguments

4. Applicant's arguments with respect to independent claims 13 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

5. Claims **15,18, 19, 22 and 24** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAULO M. NATNAEL whose telephone number is (571)272-7354. The examiner can normally be reached on 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAULOS M. NATNAEL/
Primary Examiner, Art Unit 2622

PMN
November 4, 2009